

IFW

03500.102556.

PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of:)
:)
KAZUHIRO BAN, et al.)
:)
Application No.: 10/555,383)
:)
Int'l. Filing Date: January 25, 2005)
:)
For: KIT FOR IMMOBILIZING)
ORGANIC SUBSTANCE,)
ORGANIC SUBSTANCE-)
IMMOBILIZED STRUCTURE,)
AND MANUFACTURING)
METHODS THEREFOR)

February 5, 2007

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449. Copies of the listed documents, other than the U.S. patent documents, are enclosed. Also enclosed is an English-language abstract for the listed Japanese document.

The following documents are discussed at the following pages of the specification:

| <u>Documents</u> | <u>Page(s)</u> |
|---|----------------|
| Japan 6-3317 | 6 |
| A. Nyamsi Hendji, et al., "Covalent immobilization of glucose oxidase on silanized platinum microelectrode for the monitoring of glucose", Sensors and Actuators B, Vols. 15-16, 1993 | 7 |
| U.S. Patent No. 6,225,131 | 10 |
| U.S. Publication No. 2002/0106702 | 10 |
| Joseph A. Francisco, et al., "Production and fluorescence-activated cell sorting of <i>Escherichia coli</i> expressing a functional antibody fragment on the external surface", Proceedings of the National Academy of Sciences, Vol. 90, November 1993 | 50 |
| S. Pistor, et al., "Expression of Viral Hemagglutinin on the Surface of <i>E. coli</i> ", Klin Wochenschr, Vol. 66, 1988 | 50 |
| Patrick Fuchs, et al., "Targeting Recombinant Antibodies to the Surface of <i>Escherichia Coli</i> : Fusion to a Peptidoglycan Associated Lipoprotein", Bio/Technology, Vol. 9, December 1991 | 50 |
| Alain Charbit, et al., "Versatility of a vector for expressing foreign polypeptides at the surface of Gram-negative bacteria", Gene, Vol. 70, 1988 | 50 |
| Andrew Bradbury, et al., "Use of Living Columns to Select Specific Phage Antibodies", Bio/Technology, Vol. 11, December 1993 | 50 |
| Lisbeth Hedegaard, et al., "Type 1 fimbriae of <i>Escherichia coli</i> as carriers of heterologous antigenic sequences", Gene, Vol. 85, 1989 | 50 |
| Maurice Hofnung, "Expression of Foreign Polypeptides at the <i>Escherichia coli</i> Cell Surface", Methods in Cell Biology, Vol. 34, 1991 | 50 |

| | |
|---|----|
| Thomas Klauser, et al., "Extracellular transport of cholera toxin B subunit using <i>Neisseria</i> IgA protease β -domain: conformation-dependent outer membrane translocation", EMBO Journal, Vol. 9, 1990 | 50 |
| Jamie K. Scott, et al., "Searching for Peptide Ligands with an Epitope Library", Science, Vol. 249, 1990 | 52 |
| Steven E. Cwirla, et al., "Peptides on phage: A vast library of peptides for identifying ligands", Proceedings of the National Academy of Sciences, Vol. 87, August 1990 | 52 |
| J. Sambrook, et al., Molecular Cloning, A Laboratory Manual, Second Edition, Cold Spring Harbor Laboratory Press, 1989 | 62 |

The Examiner's attention is also directed to the following U.S. Applications:


| <u>Application No.</u> | <u>Int'l. Filing Date</u> | <u>U.S. Filing Date or 371(c) Date</u> | <u>Applicants</u> |
|------------------------|-------------------------------|--|--|
| 11/592,313 | | 11/03/2006 | K. Ban M. Ogawa N. Utsunomiya H. Hashimoto M. Komatsu Y. Murayama |
| 11/444,387 | | 06/01/2006 | S. Hatakeyama H. Shiotsuka T. Nomoto M. Kaieda |
| 10/592,791 | 03/31/2005 | | H. Shiotsuka T. Imamura I. Kumagai |
| 10/548,442 | 08/18/2004 | | H. Shiotsuka T. Imamura T. Nomoto M. Ogawa |
| 10/546,404 | 04/30/04 | | T. Imamura T. Yano T. Nomoto S. Kozaki T. Honma A. Tsuchitani |

This Information Disclosure Statement is being filed before the issuance of a first Office Action on the merits. Therefore, no fee under 37 C.F.R. § 1.97(c)(2) is believed due. Nevertheless, the Commissioner may charge Deposit Account No. 06-1205, should any fee be due for filing this paper.

Applicants request that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be initialed and returned indicating that such information has been considered.

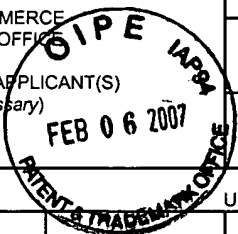
Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Diamond E. Vadnais
Attorney for Applicants
Registration No.: 52,310

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3800
Facsimile: (212) 218-2200

| | | | | | | | |
|---|--|---|----------|---|-------|--------------------------------------|---------------------------------------|
| FORM PTO 1449 (modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary) | | | | ATTY DOCKET NO. 03500.102556. | | APPLICATION NO. 10/555,383 | |
|  | | | | APPLICANT KAZUHIRO BAN, et al. | | | |
| | | | | INT'L. FILING DATE January 25, 2005 | | GROUP | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | | 6,908,720 | 06/21/05 | Kenmoku, et al. | 430 | 97 | |
| | | 6,869,782 | 03/22/05 | Kenmoku, et al. | 435 | 130 | |
| | | 6,867,023 | 03/15/05 | Honma, et al. | 435 | 135 | |
| | | 6,864,074 | 03/08/05 | Yano, et al. | 435 | 189 | |
| | | 6,861,550 | 03/01/05 | Honma, et al. | 560 | 53 | |
| | | 6,861,496 | 03/01/05 | Kenmoku, et al. | 528 | 272 | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES/NO/ OR ABSTRACT |
| | | 6-3317 | 01/11/94 | Japan | | | Abstract |
| OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
| | | Andrew Bradbury, et al., "Use of Living Columns to Select Specific Phage Antibodies", Bio/Technology, Vol. 11, December 1993, pp. 1565-1569. | | | | | |
| | | Alain Charbit, et al., "Versatility of a vector for expressing foreign polypeptides at the surface of Gram-negative bacteria", Gene, Vol. 70, 1988, pp. 181-189. | | | | | |
| | | Steven E. Cwirla, et al., "Peptides on phage: A vast library of peptides for identifying ligands", Proceedings of the National Academy of Sciences, Vol. 87, August 1990, pp. 6378-6382. | | | | | |
| | | Joseph A. Francisco, et al., "Production and fluorescence-activated cell sorting of <i>Escherichia coli</i> expressing a functional antibody fragment on the external surface", Proceedings of the National Academy of Sciences, Vol. 90, November 1993, pp. 10444-10448. | | | | | |
| | | Patrick Fuchs, et al., "Targeting Recombinant Antibodies to the Surface of <i>Escherichia Coli</i> : Fusion to a Peptidoglycan Associated Lipoprotein", Bio/Technology, Vol. 9, December 1991, pp. 1369-1372. | | | | | |
| | | Lisbeth Hedegaard, et al., "Type 1 fimbriae of <i>Escherichia coli</i> as carriers of heterologous antigenic sequences", Gene, Vol. 85, 1989, pp. 115-124. | | | | | |
| | | A. Nyamsi Hendji, et al., "Covalent immobilization of glucose oxidase on silanized platinum microelectrode for the monitoring of glucose", Sensors and Actuators B, Vols. 15-16, 1993, pp. 127-134. | | | | | |
| EXAMINER | | | | DATE CONSIDERED | | | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | | | | | | |
|---|--|---|----------|---|-------|--------------------------------------|---------------------------------------|
| FORM PTO 1449 (modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary) | | | | ATTY DOCKET NO. 03500.102556. | | APPLICATION NO. 10/555,383 | |
| | | | | APPLICANT KAZUHIRO BAN, et al. | | | |
| | | | | INT'L. FILING DATE January 25, 2005 | | GROUP | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | | 6,858,417 | 02/22/05 | Yano, et al. | 435 | 189 | |
| | | 6,858,367 | 02/22/05 | Yano, et al. | 430 | 109 | |
| | | 6,855,472 | 02/15/05 | Imamura, et al. | 430 | 109.4 | |
| | | 6,828,074 | 12/07/04 | Yano, et al. | 430 | 109.1 | |
| | | 6,808,854 | 10/26/04 | Imamura, et al. | 430 | 110 | |
| | | 6,803,444 | 10/12/04 | Suzuki, et al. | 528 | 361 | |
| | | 6,686,439 | 02/03/04 | Kenmoku, et al. | 528 | 272 | |
| | | 6,660,516 | 12/09/03 | Imamura, et al. | 435 | 252.8 | |
| | | 6,649,381 | 11/18/03 | Honma, et al. | 435 | 135 | |
| | | 6,586,562 | 07/01/03 | Honma, et al. | 528 | 361 | |
| | | 6,479,621 | 11/12/02 | Honma, et al. | 528 | 361 | |
| | | 6,472,191 | 10/29/02 | Yano, et al. | 435 | 189 | |
| | | 6,319,706 | 11/20/01 | Kawaguchi, et al. | 435 | 293.1 | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES/NO/ OR ABSTRACT |
| | | | | | | | |
| OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
| | | Maurice Hofnung, "Expression of Foreign Polypeptides at the <i>Escherichia coli</i> Cell Surface", Method in Cell Biology, Vol. 34, 1991, pp. 77-105. | | | | | |
| | | Thomas Klauser, et al., "Extracellular transport of cholera toxin B subunit using <i>Neisseria</i> IgA protease β -domain: conformation-dependent outer membrane translocation", EMBO Journal, Vol. 9, 1990, pp. 1991-1999. | | | | | |
| | | S. Pistor, et al., "Expression of Viral Hemagglutinin on the Surface of <i>E. coli</i> ", Klin Wochenschr, Vol. 66, 1988, pp. 110-116. | | | | | |
| | | J. Sambrook, et al., Molecular Cloning, A Laboratory Manual, Second Edition, Cold Spring Harbor Laboratory Press, 1989, p. 5.72. | | | | | |
| | | Jamie K. Scott, et al., "Searching for Peptide Ligands with an Epitope Library", Science, Vol. 249, 1990, pp. 386-390. | | | | | |
| | | | | DATE CONSIDERED | | | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | | | | | | |
|---|--|--------------------|----------|---|-------|--------------------------------------|---------------------------------------|
| FORM PTO 1449 (modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary) | | | | ATTY DOCKET NO. 03500.102556. | | APPLICATION NO. 10/555,383 | |
| | | | | APPLICANT KAZUHIRO BAN, et al. | | | |
| | | | | INT'L. FILING DATE January 25, 2005 | | GROUP | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | | 6,225,131 | 05/01/01 | van Damme, et al. | 436 | 524 | |
| | | 6,096,530 | 08/01/00 | Kato, et al. | 435 | 253.3 | |
| | | 6,017,746 | 01/25/00 | Imamura, et al. | 435 | 252.1 | |
| | | 6,004,772 | 12/21/99 | Imamura, et al. | 435 | 34 | |
| | | 5,993,658 | 11/30/99 | Kato, et al. | 210 | 611 | |
| | | 5,962,305 | 10/05/99 | Mihara, et al. | 435 | 262.5 | |
| | | 5,945,331 | 08/31/99 | Kozaki, et al. | 435 | 262 | |
| | | 5,863,789 | 01/26/99 | Komatsu, et al. | 435 | 262 | |
| | | 5,854,059 | 12/29/98 | Kozaki, et al. | 435 | 262 | |
| | | 5,807,736 | 09/15/98 | Kozaki, et al. | 435 | 262.5 | |
| | | 5,803,664 | 09/08/98 | Kawabata, et al. | 405 | 128 | |
| | | 5,693,527 | 12/02/97 | Imamura | 435 | 262 | |
| | | 5,679,568 | 10/21/97 | Imamura, et al. | 435 | 262.5 | |
| | | 5,665,597 | 09/09/97 | Imamura, et al. | 435 | 253.3 | |
| | | 2006/0183235 | 08/17/06 | Hashimoto, et al. | 436 | 86 | |
| | | 2006/0115861 | 06/01/06 | Shiotsuka, et al. | 435 | 7.9 | |
| | | 2004/0067576 | 04/08/04 | Honma, et al. | 435 | 252.34 | |
| | | 2003/0170716 | 09/11/03 | Yano, et al. | 435 | 6 | |
| | | 2002/0106702 | 08/08/02 | Wagner, et al. | 435 | 7.9 | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES/NO/ OR ABSTRACT |
| | | | | | | | |
| OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
| | | | | | | | |
| EXAMINER | | | | DATE CONSIDERED | | | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.